

ENERGY TIDBITS

August 2004

Advanced Energy & Fuel Cell Technologies: Manufacturing Opportunities & Challenges will be held on October 11-13 at the Laurel Manor in Livonia. The Society of Manufacturing Engineers (SME) is bringing manufacturers together with scientists to help make these advanced technologies more mainstream. This unique conference will demystify fuel cell technologies by featuring interactive displays and exhibits of automotive, portable, and stationary fuel cells. Manufacturers will learn how they can position themselves to become a supplier to the industry. Participants will also learn how they can reduce their energy costs by implementing lean energy management practices within their operations. Speakers will highlight the cross-industry applications of advanced energy systems and fuel cell technologies. Presenters will also focus on the development of an infrastructure capable of safely delivering and storing hydrogen. Keynote speakers will include Energy Secretary Spencer Abraham. <http://www.sme.org/aet>

Vegetative Green Roof has been installed on a portion of the Plant and Soil Sciences Building at Michigan State University. The roof, made from layers of plastic, water-retaining material, a soil-like matter and a flowering ground cover called sedum, helps keep buildings cool in the summer. In addition to help cool the rooms inside a building, green roofs also reduce airborne pollution, decrease storm water runoff by more than 60 percent, reduce noise and increase roof durability. <http://www.hrt.msu.edu/greenroof/>

Energy Choices for a Sustainable Future will be held at Upland Hills Ecological Awareness Center on Saturday, August 21, 10 am – 5 pm. Workshop topics will include: Cost Effective Ways to Save Energy, Energy Efficient Home, End of the Oil Era: Options for the Future, Spiritual Dimensions of Energy Conservation, Overview of Renewable Energy, Myths and Facts about Hydrogen and more!! Cost is \$25(\$20 if registered by August 16th) Lunch included. Contact uheac@earthlink.net or call 248-693-1021 to register. Visit <http://www.uheac.org> for more information.

DEQ's Green District Office had groundbreaking on June 9. The future Warren District Office will achieve at least a basic LEED certification. However, the goal is the Gold certification. The building will reduce potable water use by 20%, reduce energy use by 35%, and recycle 50% of all construction materials. The design will use natural daylighting, storm water for irrigation, renewable energy, sustainable wood sources, regionally manufactured materials, and low-emitting materials.

PATH Top 10 Technologies for 2004 are practical, easy-to-use building technologies. <http://www.pathnet.org/sp.asp?id=10587>

Procter & Gamble applied a system-level strategy to optimize a compressed air system at its paper products mill in Mehoopany, PA. The project improved production and system performance, and saved 7.6 million kWh and \$309,000 per year in maintenance costs. <http://www.nrel.gov/docs/fy04osti/33966.pdf>

Process Heating Systems & Innovative High Temperature Furnace Workshop will be held at the University of Michigan on August 31 and September 1. August 31 will include an introduction to process heating, discussion of heating methods, heat transfer, heat containment, waste heat recovery, process controls, and emission reductions. Participants will also learn how to use the Process Heating Assessment and Survey Tool. September 1 will include a discussion, review, and demonstration of an innovative high temperature furnace being developed at the University of Michigan with funding from DOE. Registration fee is \$45. Contact me at jhsarve@michigan.gov and I will email you a flyer.

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University of Maryland Study shows that skies were dramatically bluer and the air was much healthier during the August 2003 blackout. Measurements taken 24 hours after power plants had shut down found a 90% reduction in sulfur dioxide and a 50% reduction in smog. The scientists also found that the amount of light scattering particles in the air dropped by 70% and visibility increased by some 20 miles

283 Energy Software Tools for Buildings are listed on the U.S. Dept. of Energy's web site at http://www.eere.energy.gov/buildings/tools_directory/

DTE Hydrogen Technology Park in Southfield had groundbreaking on June 14. This 3-year Department of Energy partnership project will provide critical insight into the future role of hydrogen. The working prototype will produce hydrogen gas from tap water using a mix of solar and biomass power; compress and store the hydrogen on site; and deliver enough electricity to power a small office complex and produce enough compressed hydrogen gas to power about three fuel cell vehicles per day.

Infrared Radiant Heating article is available at the Energy Office web site at http://www.michigan.gov/documents/CIS_EO_Energy_Observer_06-04_93953_7.pdf

Michigan Solar House will be an entry in the 2005 Solar Decathlon, an annual U.S. Dept. of Energy competition, to be conducted next autumn on the National Mall in Washington, D.C. One of 19 teams, the UM students will transport and re-erect their house on the mall. In keeping with Decathlon guidelines, the UM house encompasses only 800 sq.ft. The rectangular house is 1-1/2 stories tall. A cubic projection above its flat roofline contains a sleeping loft. Two structural systems interface in the house. System one involves structural insulated panels. Comprising the rear facade, base and roof, the rigid panels provide insulation and reduce air infiltration. They also make on-site assembly practicable. System two is a computer-cut, plywood grid, supporting a flexible membrane of transparent plastic. Replacing conventional windows, the serpentine membrane sheathes the front facade and portions of the side facades. Parts of the membrane include narrow, photovoltaic panels. <http://www.umich.edu/~miso/>



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